

REMARKS

Applicant respectfully requests consideration of the subject application as amended herein. This Amendment is submitted in response to the Office Action mailed on April 27, 2009. Claims 1-7 and 21-32 are pending. Claims 1-6 and 21-32 are rejected. Claim 7 is objected to. In this Amendment, claims 1, 4-7, 21-23, 27-29 and 31 have been amended. The amendments to the claims are supported in at least paragraphs 7, 29, 30, 33, 34, 35, 37 and 38 of the specification as originally filed. No new matter has been added. No claims have been canceled. Therefore, claims 1-7 and 21-32 are presented for examination.

SUMMARY OF THE INTERVIEW

Applicant thanks the Examiner for the telephonic interview conducted on June 23, 2009. Applicant summarizes the interview as having discussed the differences between the proposed amendments and the currently cited prior art. No agreement on patentability was reached.

Allowable Subject Matter

The Examiner has objected to claim 7 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant notes with appreciation the Examiner's indication of allowable subject matter. In view of the above amendments and remarks, Applicant submits that claim 7 now depends from an allowable base claim, and therefore declines to amend claim 7 at this time.

Rejections Under 35 U.S.C. § 112

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner stated it is unclear in the limitation "configuring each FC node device in the communications system to resolve the backup address into an address of the first FC node device based on the FC protocol" which address (primary or backup, or others) of the first FC node device is used to resolve the backup address.

Claim 1 has been amended. Applicant, therefore, respectfully submits that the Examiner remove the rejection under 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. § 103

Claims 1-6

Claims 1-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bessire, (U.S. Patent No. 7,055,056 B2, hereinafter “Bessire”), and in view of Cranor, et al., (U.S. Patent Publication No. 2003/0093523 A1, hereinafter “Cranor”).

Bessire discloses a computer system having two SCSI controller cards, each connected directly connected to a single fiber channel storage unit. One SCSI controller is assigned as the primary controller and the other SCSI controller is assigned as the secondary controller. Each SCSI controller is assigned two IP addresses, one being its primary IP address and the other being a secondary IP address which was assigned to the other SCSI controller. Each SCSI controller stores the primary and secondary IP addresses in its NVRAM. I/O requests that are sent to one controller is copied, sent to and stored in the NVRAM of the other controller. Therefore, if one controller fails, the I/O request is executed by the other controller since the other controller possesses two IP addresses and a copy of the I/O request in its NVRAM.

Cranor discloses a system for building associations between clients, which requests content from content servers, with domain names servers used by the clients. The system of Cranor embeds the network address of a client in a calibrating domain name, and utilizes the calibrating domain name to identify the client to a DNS server. For a client having an IP address of 10.0.0.01, a redirector server embeds the address into a domain name as “http://10.0.0.1.example.com/tr.gif.”

Independent claim 1 claims a first FC storage device registering with a name server a symbolic name that is encoded with a primary address and a backup address, detecting a link failure between a second FC storage device and a third FC storage device, and using the registered symbolic name to link a FC port of the first FC storage device over a fabric network to the third FC storage device. Bessire does not teach or suggest registering a symbolic name with a name server as claimed because Bessire describes that each SCSI controller stores the primary and secondary IP addresses locally in its NVRAM and not within a symbolic name registered with a name server. Moreover, in Bessire, there is no fabric network, nor is there a second FC

device, a third FC device, or a link failure between the second FC device and third FC device because Bessire describes only a *single* fiber channel storage unit and two SCSI controllers that are *directly connected* to the *single* fiber channel storage unit. Bessire, therefore, does not teach or suggest detecting a link failure between a second FC storage device and a third FC storage device, and using the symbolic name registered with the name server to link a FC port of the first FC storage device over a fabric network to the third FC storage device

Cranor also fails to teach or suggest these elements of claim 1. Cranor does not teach or suggest a symbolic name encoded with a primary address and a backup address for a first FC storage device because Cranor, instead, describes that a redirector server embeds *the* address of a *client* into a domain name as “http://10.0.0.1.example.com/tr.gif.” The embedding of a single client address into a domain name is not equivalent to a symbolic name encoded with a *primary address and a backup address*. Moreover, Cranor does not use a symbolic name registered with the name server to *link an FC port over a fabric network to a third FC device* when a *link failure* of the second FC storage device *is detected* because Cranor does not describe a FC port, fabric network, FC device or detecting link failures at all. Therefore, Cranor does not teach or suggest registering with a name server a symbolic name that is encoded with a primary address and a backup address, detecting a link failure between a second FC storage device and a third FC storage device, and using the registered symbolic name to link a FC port of the first FC storage device over a fabric network to the third FC storage device.

Therefore, neither Bessire nor Cranor teaches or suggests registering with a name server a symbolic name that includes a primary address and backup address and using the symbolic name to link the FC port over a fabric network to a third FC device when a link failure of the second FC storage device is detected, as claimed.

For the reasons stated above, the combination of Bessire and Cranor fails to teach or suggest all of the elements of the claims. Therefore, Applicant respectfully submits that claim 1 is patentable over the cited references. Given that dependent claims 2-6 depend, either directly or indirectly, from independent claim 1, Applicant respectfully submits that these dependent claims are also patentable over the cited reference. Accordingly, Applicant respectfully requests that the rejection of claims 1-6 under 35 U.S.C. §103(a) be withdrawn.

Claims 21-32

Claims 21-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Latif, et al., (U.S. Publication No. 2003/0091037 A1, hereinafter “Latif”) in view of Bessire.

Latif discloses a storage system having both Internet Protocol (IP) and Fibre Channel (FC) address domains. Latif further discloses switches that provide translation between the IP and FC addresses, where the IP and FC addresses are stored in tables in the switches. Each switch assigns an IP address, SoIP socket number and FC address to each FC device. Each FC device advertises its IP address and SoIP socket number to a Name Server.

Independent claims 21 and 27 claim registering the plurality of IP addresses as a symbolic name for the first FC N_Port of the storage device with a name server, wherein the symbolic name is encoded with a primary IP address, and a backup IP address associated with a second FC N_Port on the second storage device.

The Examiner acknowledges that Latif fails to teach or suggest a plurality of IP addresses that includes a primary address and a backup address associated with a second FC N_Port and cites Bessire for such teaching. As noted above, Bessire does not teach or suggest registering with a name server a symbolic name that is encoded with a primary address and a backup address because Bessire stores the primary address and backup address locally in the NVRAM of each controller. Therefore, neither Latif nor Bessire teaches or suggests these elements of claims 21 and 27, as claimed.

For the reasons stated above, the combination of Latif and Bessire fails to teach or suggest all of the elements of the claims. Therefore, Applicant respectfully submits that claims 21 and 27 are patentable over the cited references. Given that dependent claims 22-26 depend, either directly or indirectly, from independent claim 21, and dependent claims 28-32 depend, either directly or indirectly, from independent claim 27, Applicant respectfully submits that these dependent claims are also patentable over the cited reference. Accordingly, Applicant respectfully requests that the rejection of claims 21-32 under 35 U.S.C. §103(a) be withdrawn.

SUMMARY

Claims 1-7 and 21-32 are currently pending. In view of the foregoing amendments and remarks, Applicant respectfully submits that the pending claims are in condition for allowance. Applicant respectfully requests reconsideration of the application and allowance of the pending claims.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact the undersigned at (408) 720-8300.

Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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